**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD new claim 11 in accordance with the following:

1. (previously presented) An image extraction method, comprising:

a first image pickup step to pick up an image of an object positioned in front of a background using wavelengths in a visible light region;

a second image pickup step to pick up an image of the object positioned in front of the background using wavelengths in an infrared region; and

using a computer processor extracting only the image of the object based on the images picked up by the first and second image pickup steps,

wherein at least a surface of the background is formed by an organic dye.

2. (previously presented) The image extraction method as claimed in claim 1, wherein said extracting extracts the object from the image picked up by the first image pickup step depending on color, and extracts the object from the image picked up by the second image pickup step depending on luminance.

3. (original) The image extraction method as claimed in claim 1, wherein said organic dye has a color selected from a group consisting of blue-green color, gold color and silver color.

4. (original) The image extraction method as claimed in claim 1, wherein said organic dye is selected from a group consisting of cyanine organic dyes, phthalocyanine organic dyes, and azo organic dyes.

5. (previously presented) An authentication apparatus, comprising:

a first image pickup section to pick up an image of an object positioned in front of a background using wavelengths in a visible light region;

a second image pickup section to pick up an image of the object positioned in front of the background using wavelengths in an infrared region;

an extracting section to extract only an image of the object based on the images picked up by the first and second image pickup sections; and

a matching section to compare the image extracted by the extracting section and registered object images, and to output a result of comparison as an authentication result,

wherein at least a surface of the background is formed by an organic dye.

6. (original) The authentication apparatus as claimed in claim 5, wherein said extracting section extracts the image of the object from the image picked up by the first image pickup section depending on color, and extracts the image of the object from the image picked up by the second image pickup section depending on luminance.

7. (original) The authentication apparatus as claimed in claim 5, wherein said matching section outputs the comparison result by comparing an average of the image of the object extracted by the extracting section from the image picked up by the first image pickup section and the image of the object extracted by the extracting section from the image picked up by the second image pickup section, and the registered object images.

8. (original) The authentication apparatus as claimed in claim 5, wherein the organic dye has a color selected from a group consisting of blue-green color, gold color and silver color.

9. (original) The authentication apparatus as claimed in claim 5, wherein the organic dye is selected from a group consisting of cyanine organic dyes, phthalocyanine organic dyes, and azo organic dyes.

10. (previously presented) A method of extracting a target object positioned in front of a background, comprising:

using a background including a surface formed by an organic dye, the organic dye having a color distinguishable in a visible light region from a color of the target object, and having a luminance distinguishable in an infrared light region from a luminance of the target object;

using a camera capturing a first image of the target object using the visible light and capturing a second image of the target object using the infrared light; and

using a computer processor extracting the target object based on the captured first and second images of the target object using the visible light and the infrared light respectively.

11. (New) The method according to claim 10, wherein said using of the camera further comprises using a first camera that captures the first image of the target object using the visible light and using a second cameral that captures the second image of the target object using the infrared light.